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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/890,355	03/28/2002	Thomas J. Fendya	440490/PALL	1196

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EXAMINER

AMINZAY, SHAIMA Q

ART UNIT	PAPER NUMBER
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2684

DATE MAILED: 07/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/890,355

Applicant(s)

FENDYA ET AL.

Examiner

Shaima Q. Aminzay

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 March 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is responsive to communications: Application Filed: 3/28/2002, Pact: 01/31/2000, US Publication Date: 03/02/1999.
2. Independent Claims 1, 6, and dependent claims 2-5 are pending in the case.
3. The present title of the application is "Range Extension Within a Communication System".

NON-FINAL ACTION

Content of Specification

4. Content of Specification:
 - (a) Title of the Invention: See 37 CFR 1.72(a) and MPEP § 606. The title of the invention should be placed at the top of the first page of the specification unless the title is provided in an application data sheet. The title of the invention should be brief but technically accurate and descriptive, preferably from two to seven words may not contain more than 500 characters.
 - (b) Cross-References to Related Applications: See 37 CFR 1.78 and MPEP § 201.11.
 - (c) Statement Regarding Federally Sponsored Research and Development: See MPEP § 310.
 - (d) Incorporation-By-Reference Of Material Submitted On a Compact Disc: The specification is required to include an incorporation-by-reference of electronic documents that are to become part of the permanent United States Patent and Trademark Office records in the file of a patent application. See 37 CFR 1.52(e) and MPEP § 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text were permitted as electronic documents on compact discs beginning on September 8, 2000.

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Or alternatively, Reference to a "Microfiche Appendix": See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.

- (e) Background of the Invention: See MPEP § 608.01(c). The specification should set forth the Background of the Invention in two parts:
 - (1) Field of the Invention: A statement of the field of art to which the invention pertains. This statement may include a paraphrasing of the applicable U.S. patent classification definitions of the subject matter of the claimed invention. This item may also be titled "Technical Field."
 - (2) Description of the Related Art including information disclosed under 37 CFR 1.97 and 37 CFR 1.98: A description of the related art known to the applicant and including, if applicable, references to specific related art and problems involved in the prior art which are solved by the applicant's invention. This item may also be titled "Background Art."
- (f) Brief Summary of the Invention: See MPEP § 608.01(d). A brief summary or general statement of the invention as set forth in 37 CFR 1.73. The summary is separate and distinct from the abstract and is directed toward the invention rather than the disclosure as a whole. The summary may point out the advantages of the invention or how it solves problems previously existent in the prior art (and preferably indicated in the Background of the Invention). In chemical cases it should point out in general terms the utility of the invention. If possible, the nature and gist of the invention or the inventive concept should be set forth. Objects of the invention should be treated briefly and only to the extent that they contribute to an understanding of the invention.
- (g) Brief Description of the Several Views of the Drawing(s): See MPEP § 608.01(f). A reference to and brief description of the drawing(s) as set forth in 37 CFR 1.74.
- (h) Detailed Description of the Invention: See MPEP § 608.01(g). A description of the preferred embodiment(s) of the invention as required in 37 CFR 1.71. The description should be as short and specific as is necessary to describe the invention adequately and accurately. Where elements or groups of elements, compounds, and processes, which are conventional and generally widely known in the field of the invention described and their exact nature or type is not necessary for an understanding and use of the invention by a person skilled in the art, they should not be described in detail. However, where particularly

complicated subject matter is involved or where the elements, compounds, or processes may not be commonly or widely known in the field, the specification should refer to another patent or readily available publication which adequately describes the subject matter.

- (i) Claim or Claims: See 37 CFR 1.75 and MPEP § 608.01(m). The claim or claims must commence on separate sheet or electronic page (37 CFR 1.52(b)(3)). Where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation. There may be plural indentations to further segregate subcombinations or related steps. See 37 CFR 1.75 and MPEP § 608.01(i)-(p).
- (j) Abstract of the Disclosure: See MPEP § 608.01(f). A brief narrative of the disclosure as a whole in a single paragraph of 150 words or less commencing on a separate sheet following the claims. In an international application which has entered the national stage (37 CFR 1.491(b)), the applicant need not submit an abstract commencing on a separate sheet if an abstract was published with the international application under PCT Article 21. The abstract that appears on the cover page of the pamphlet published by the International Bureau (IB) of the World Intellectual Property Organization (WIPO) is the abstract that will be used by the USPTO. See MPEP § 1893.03(e).
- (k) Sequence Listing. See 37 CFR 1.821-1.825 and MPEP §§ 2421-2431. The requirement for a sequence listing applies to all sequences disclosed in a given application, whether the sequences are claimed or not. See MPEP § 2421.02.

Objection

- 5. This application does not contain an abstract of the disclosure as required by 37 CFR 1.72(b). An abstract on a separate sheet is required.
- 6. The applicant's specification copies are not readable, the applicant is required to submit legible copies of the specification. The appropriate corrections are required.

Claim Rejections - 35 USC § 103

◆ The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

◆ Claims 1, and 6 are rejected under 35 U.S.C.103(a) as being unpatentable over Hiramatsu U. S. Patent Number 6212407 B1, and in view of Tokuda et al. U. S. Patent number 6035213.

7. Regarding claims 1, and 6, Hiramatsu teaches a mobile communication system (see for example, Figure 4-8, column 1, lines 9-21), the system comprising: a first receiver (see for example, Figure 7, and column 7, lines 11-14, and lines 38-41, the received circuit (202) receives signals from the first sector via antenna 201 (Figure 4)), and a first despreader having the received signal as an input (see for example, Figure 7, Despreader 203, column 7, line 12, and lines 49-52; the received signals are received in despreader circuit 203 (Figure 7)), and outputting a first despreader signal wherein the first despreader utilizes a spreading code that is delayed with respect to system time (see for example, Figure 7, the first delay circuit 206 and its connection to the despreader 203, and column 7, lines 49-52; and in the first and second delay circuits 206 and 207 "there may be provided a circuit which receives values of delay time sent

from the base station to set the values to the first and second delay circuits 206 and 207" (column 8, lines 30-38, and Figure 6)).

However, Hiramatsu does not teach the systems range extension.

Tokuda teaches the systems range extension (see for example, column 1, line lines 64-67, and column 2, lines 1-15; the communication system's cell range can be extended using the specific time delays and adjusting signal transmission timeslots).

It would have been obvious to one of ordinary skill in the art at the time invention was made to combine Tokuda's mobile communication's cell range extension (see for example, column 1, lines 8-9, and 64-67) with Hiramatsu's mobile communication system with improved interferences (see for example, column 1, lines 9-20, and column 2, lines 55-67) to provide a communication system with extend radio cell simply by using the specific time delays and adjusting signal transmission time-slots (Tokuda, column 1, lines 64-67, and column 2, lines 1-16), and to provide a system that "permits large-size expansion of the radio cells, which leads to a reduction in the total number of fixed base stations in the system. This provides for a reduction in the infrastructure costs" (Tokuda, column 6, lines 43-47), and to provide the "proposed fixed base station allows simple and rapid extension of existing radio cells. This makes it possible to plan for a very flexible radio network" (Tokuda, column 6, lines 50-52).

8. Regarding claims 2, and 5, Hiramatsu and Tokuda teach claim 1, and further Hiramatsu teaches the second receiver (see for example, column 7, lines 43-45,

the first receiver and the second receiver limitations are described in Figure 7, and column 7, Figures 3-6, column 7, lines 10-67 continued to column 8, lines 1-34, and further, see for example Figure 4, first sector antenna 101, Figure 5, first received/transmit signal, and Figure 4, second sector antenna 102, and Figure 5, second receive/transmit signal).

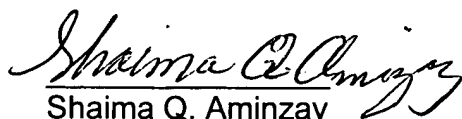
9. Regarding claims 3, 4, 7, and 8, Hiramatsu and Tokuda teach claim 2, and further Hiramatsu teaches the time period and signal transmission (see for example Figure 6, and column 6, lines 65-67 continued to column 7, lines 1-9, and lines 44-45).
10. Regarding claim 9, and 10, Hiramatsu and Tokuda teach claim 6, and further Tokuda teaches maximum transmission time (see for example column 2, lines 1-16).

Conclusion

1. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892 form.

Inquiry

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shaima Q. Aminzay whose telephone number is 703-305-8723. The examiner can normally be reached on 7:00 AM.-5:00 PM.
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on 703-308-7745. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9314. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the TC 2600's customer service telephone number is 703-305-3900.


Shaima Q. Aminzay
(Examiner)


NAY MAUNG
SUPERVISORY PATENT EXAMINER

Nay Maung
(SPE)

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June 27, 2004